Geotechnical Testing Journal
Index to Volume 10
1987

Number	Month of Issue	Pages
1	March	1-40
2	June	41-96
3	September	97-164
4	December	165-244

A

Aggregates
The dimethyl sulfoxide (DMSO) accelerated weathering test for aggregates (Szymoniak, Vinson, Wilson, and Walker), Dec., 173
Quantity of fines produced during crushing, handling, and placement of roadway aggregates (Pintner, Vinson, and Johnson), Dec., 165

Allen, J. C.: *see* Isenhower, W. M., Stokoe, K. H., II, and Allen, J. C.

Anisotropy: Directional shear cell experiments on a dry cohesionless soil (Sture, Budiman, Ontuna, and Ko), June, 71

B

BenSaid, M. A.: *see* Juran, I. and BenSaid, M. A.

Bergado, D. T. and Huan, N. M.: Undrained deformability and strength characteristics of soft Bangkok clay by the screw plate test, Sept., 113

Bergdahl, U.: *see* Larsson, R., Bergdahl, U., and Eriksson, L.

Bindumadhava: *see* Nagaraj, T. S., Murthy, B. R. S., and Bindumadhava

Borehole test: Reproducibility of borehole shear test results in marine clay (Lutenegger and Timian), March, 13

Bosscher, P. J. and Nelson, D. L.: Resonant column testing of frozen Ottawa sand, Sept., 123

Boundary friction: Investigation of boundary friction effects in polyaxial tests (Demiris), June, 86

Budiman, J. S.: *see* Sture, S., Budiman, J. S., Ontuna, A. K., and Ko, H.-Y.

C

Cain, P., Yuen, C. M. K., Le Bel, G. R., Crawford, A. M., and Lau, D. H. C.: Triaxial testing of brittle sandstone using a multiple failure state method, Dec., 213

Carter, J. P.: *see* Ooi, L. H. and Carter, K. P.

Cavities: Cavity expansion tests in a hollow cylinder cell (Juran and BenSaid), Dec., 203

Cavity expansion: Cavity expansion tests in a hollow cylinder cell (Juran and BenSaid), Dec., 203

Clays
Differential flow patterns through compacted clays (Peirce, Sallfors, and Ford), Dec, 218
Liquid and plastic limits as determined from the fall cone and the Casagrande methods (Wasti), March, 26
Parameter sensitivity of hydraulic conductivity testing procedure (Peirce, Sallfors, and Peterson), Dec., 223
Undrained deformability and strength characteristics of soft Bangkok clay by the screw plate test (Bergado and Huan), Sept., 113

Coal: Triaxial testing of brittle sandstone using a multiple failure state method (Cain, Yuen, Le Bel, Crawford, and Lau), Dec., 213

Cohesive soils: Evaluation of shear strength in cohesive soils with special reference to Swedish practice and experience (Larsson, Bergdahl, and Eriksson), Sept., 105

Cohesionless soil: Directional shear cell experiments on a dry cohesionless soil (Sture, Budiman, Ontuna, and Ko), June, 71

Compaction
Differential flow patterns through compacted clays (Peirce, Sallfors, and Ford), Dec., 218
Methods of evaluating the expansion potential of compacted soils with significant fractions of large aggregate (Houston and Vann), June, 59

Cone penetration test: Cone penetration of partially saturated sands (Hryciw and Dowding), Sept., 135

Cone penetrometer: Liquid limit determination—further simplified (Nagaraj, Murthy, and Bindumadhava), Sept., 142

Crawford, A. M: *see* Cain, P., Yuen, C. M. K., Le Bel, G. R., Crawford, A. M., and Lau, D. H. C.

Creep: The prediction of fracture fatigue parameters from creep testing of soil cement (Kim and Little), Sept., 97

D

Degradation: Quantity of fines produced during crushing, handling, and placement of roadway aggregates (Pintner, Vinson, and Johnson), Dec., 165

Demiris, C. A.: Investigation of boundary friction effects in polyaxial tests, June, 86

Deposition intensity: Factors affecting sand specimen preparation by raining (Rad and Tumay), March, 31

Diffusers: Factors affecting sand specimen preparation by raining (Rad and Tumay), March, 31

Dimethyl sulfoxide: The dimethyl sulfoxide (DMSO) accelerated weathering test for aggregates (Szymoniak, Vinson, Wilson, and Walker), Dec., 173

Dowding, C. H.: *see* Hyrciw, R. D. and Dowding, C. H.

Drill holes: Suggested method for performing the borehole shear test (Subcommittee D18.02), March, 19

Durability: The dimethyl sulfoxide (DMSO) accelerated weathering test for aggregates (Szymoniak, Vinson, Wilson, and Walker), Dec., 173

Dynamic response
Dynamic high stress experiments (Felice, Gaffney, Brown, Olsen), Dec., 192
Resonant column testing of frozen Ottawa sand (Bosscher and Nelson), Sept., 123

E

Electrolyte: A low-cost electrolytic tiltmeter for measuring slope deformation (Zhang), June, 91

Eriksson, L.: *see* Larsson, R., Bergdahl, U., and Eriksson, L.

Expansion: Methods of evaluating the expansion potential of compacted soils with significant fractions of large aggregate (Houston and Vann), June, 59

Expansive clays: Methods of evaluating the expansion potential of compacted soils with significant fractions of large aggregate (Houston and Vann), June, 59

Expansive solids: Modified free swell index for clays (Sivapullaiah, Sitharam, and Rao), June, 80
Experimental design: Parameter sensitivity of hydraulic conductivity testing procedure (Peirce, Sallfors, and Peterson), Dec., 223

F

Fatigue failure: The prediction of fracture fatigue parameters from creep testing of soil cement (Kim and Little), Sept., 97
Flat dilatometer test: Determining preconsolidation stress and penetration pore pressures from DMT contact pressures (Mayne), Sept., 146
Felice, C. W., Gaffney, E. S., Brown, J. A., and Olsen, J. M.: Dynamic high stress experiments on soil, Dec., 192
Field tests: Infiltration testing for hydraulic conductivity of soil liners (Stewart and Nolan), June, 41
Fines: Quantity of fines produced during crushing, handling, and placement of roadway aggregates (Pintner, Vinson, and Johnson), Dec., 165
Ford, K.: *see* Peirce, J. J., Sallfors, G., and Ford, K.
Frost heave tests: Procedure for determining the segregation potential of freezing soils (Konrad), June, 51
Frozen soils
Procedure for determining the segregation potential of freezing soils (Konrad), June, 51
Resonant column testing of frozen Ottawa sand (Bosscher and Nelson), Sept., 123

G-H

Gaffney, E. S.: *see* Felice, C. W., Gaffney, E. S., Brown, J. A., and Olsen, J. M.
Hopkinson bar: Dynamic high stress experiments on soil (Felice, Gaffney, Brown, and Olsen), Dec., 192
Houston, S. L. and Vann, J. D.: Methods of evaluating the expansion potential of compacted soils with significant fractions of large aggregate (Houston and Vann), June, 59
Howard, A. K.: The revised ASTM standard on the description and identification of soils (visual-manual procedure), Dec., 229
Hryciw, R. D. and Dowding, C. H.: Cone penetration of partially saturated sands, Sept., 135
Huan, N. M.: *see* Bergado, D. T. and Huan, N. M.
Hydraulic conductivity
Differential flow patterns through compacted clays (Peirce, Sallfors, and Ford), Dec., 218
Infiltration testing for hydraulic conductivity of soil liners (Stewart and Nolan), June, 41
Parameter sensitivity of hydraulic conductivity testing procedure (Peirce, Sallfors, and Peterson), Dec., 223

I-K

Impervious lining: Infiltration testing for hydraulic conductivity of soil liners (Stewart and Nolan), June, 41
In-situ testing: Cavity expansion tests in a hollow cylinder cell (Juran and BenSaid), Dec., 203
Isenhower, W. M., Stokoe, K. H., II, and Allen, J. C.: Instrumentation for torsional shear/resonant column measurements under anisotropic stresses, Dec., 183
Johnson, E. G.: *see* Pintner, R. M., Vinson, T. S., and Johnson, E. G.
Juran, I. and BenSaid, M. A.: Cavity expansion tests in a hollow cylinder cell, Dec., 203
Kim, Y. and Little, D.: The prediction of fracture fatigue parameters from creep testing of soil cement, Sept., 97
Ko, H.-Y.: *see* Sture, S., Budiman, J. S., Ontuna, A. K., and Ko, H.-Y.
Konrad, J.-M.: Procedure for determining the segregation potential of freezing soils, June, 51

L

Laboratory tests
Discussion of "A New Automatic Volume Change, Monitoring Device" by N. S. Rad and G. W. Clough (Youssef), March, 38
Factors affecting sand specimen preparation by raining (Rad and Tumay), March, 31
Instrumentation for torsional shear/resonant column measurements under anisotropic stress (Isenhower, Stokoe, and Allen), Dec., 183
Larsson, R., Bergdahl, U., and Eriksson, L.: Evaluation of shear strength in cohesive soils with special reference to Swedish practice and experience, Sept., 105
Lau, D. H. C.: *see* Cain, P., Yuen, C. M. K., Le Bel, G. R., Crawford, A. M., and Lau, D. H. C.
Le Bel, G. R.: *see* Cain, P., Yuen, C. M. K., Le Bel, G. R., Crawford, A. M., and Lau, D. H. C.
Lin, H. and Selig, E. T.: An alternative method for determining the membrane penetration correction curve, Sept., 151
Liquid limit
Discussion on "liquid limit of montmorillonite soils" by A. Sridharan, S. M. Rao, and N. S. Murthy (Youssef), Sept., 156
Liquid limit determination—further simplified (Nagaraj, Murthy, and Bindumadhava), Sept., 142
Liquid and plastic limits as determined from the fall cone and the Casagrande methods (Wasti), March, 26
Little, D. N.: *see* Kim, Y. and Little, D. N.
Lutenegger, A. J. and Timian, D. A.: Reproducibility of borehole shear test results in marine clay, March, 13

M

Mayne, P. W.: Determining preconsolidation stress and penetration pore pressures from DMT contact pressures, Sept., 146
Membranes: An alternative method for determining the membrane penetration correction curve (Lin and Selig), Sept., 151
Moisture content: Liquid limit determination—further simplified (Nagaraj, Murthy, and Bindumadhava), Sept., 142
Montmorillonite: Discussion on "liquid limit of montmorillonite soils" by A. Sridharan, S. M. Rao, and N. S. Murthy, Sept., 156
Murthy, B. R. S.: *see* Nagaraj, T. S., Murthy, B. R. S., and Bindumadhava

N-O

Nagaraj, T. S., Murthy, B. R. S., and Bindumadhava: Liquid limit determination—further simplified, Sept., 142
Nelson, D. L.: *see* Bosscher, P. J. and Nelson, D. L.
Nolan, T. W.: *see* Stewart, J. P. and Nolan, T. W.
Olsen, J. M.: *see* Felice, C. W., Gaffney, E. S., Brown, J. A., and Olsen, J. M.
Ontuna, A. K.: *see* Sture, S., Budiman, J. S., Ontuna, A. K., and Ko, H.-Y.
Ooi, L. H. and Carter, J. P.: A constant normal stiffness direct shear device for static and cyclic loading, March, 3
Overconsolidation penetration tests: Determining preconsolidation stress and penetration pore pressures from DMT contact pressures (Mayne), Sept., 146

P

Peirce, J. J., Sallfors, G., and Ford, K.: Differential flow patterns through compacted clays, Dec., 233
Peirce, J. J., Sallfors, G., and Peterson, E.: Parameter sensitivity of hydraulic conductivity testing procedure, Dec., 218
Peterson, E.: *see* Peirce, J. J., Sallfors, G., and Peterson, E.
Piles: A constant normal stiffness direct shear device for static and cyclic loading (Ooi and Carter), March, 3
Pintner, R. M., Vinson, T. S., and Johnson, E. G.: Quantity of fines produced during crushing, handling, and placement of roadway aggregates, Dec., 165
Plastic limit: Liquid and plastic limits as determined from the fall cone and Casagrande methods (Wasti), March, 26
Polyaxial tests: Investigation of boundary friction effects in polyaxial tests (Demiris), June, 86
Pore pressures: Discussion of "a new automatic volume change monitoring device" by N. S. Rad and G. W. Clough (Youssef), March, 38
Precision: Reproducibility of borehole shear test results in marine clay (Lutenegger and Timian), March, 13
Pressuremeter: Cavity expansion test in a hollow cylinder cell (Juran and BenSaid), Dec., 203
Pressuremeter tests: Undrained deformability and strength characteristics of soft Bangkok clay by the screw plate test (Bergado and Huan), Sept., 113

R

Rad, N. S. and Tumay, M. T.: Factors affecting sand specimen preparation by raining, March, 37
Rao, K. S. S.: *see* Sivapullaiah, P. V., Sitharam, T. G., and Rao, K. S. S.
Reconsolidation penetration test: Determining preconsolidation stress and penetration pore pressures from DMT contact pressures (Mayne), Sept., 146

Rocks: Investigation of boundary friction effects in polyaxial tests (Demiris), June, 86

S

Sallfors, G.
see Peirce, J. J., Sallfors, G., and Ford, K.
see Peirce, J. J., Sallfors, G., and Peterson, E.
Sands
An alternative method for determining the membrane penetration correction curve (Lin and Selig), Sept., 151
Cone penetration of partially saturated sands (Hryciw and Dowding), Sept., 135
Resonant column testing of frozen Ottawa sand (Bosscher and Nelson), Sept., 123
The revised ASTM standard on the description and identification of soils (visual-manual procedure) (Howard), Dec., 229
Sandstone: Triaxial testing of brittle sandstone using a multiple failure state method (Cain, Yuen, Le Bel, Crawford, and Lau), Dec., 213
Saturation: Cone penetration of partially saturated sands (Hryciw and Dowding), Sept., 135
Schreiner, H. D.: Discussion on "liquid limit of montmorillonite soils" by A. Sridharan, S. M. Rao, and N. S. Murthy, Sept., 156
Screw plate tests: Undrained deformability and strength characteristics of soft Bangkok clay by the screw plate test (Bergado and Huan), Sept., 13
Segregation potential: Procedure for determining the segregation potential of freezing soils (Konrad), June, 51
Selig, E. T.: *see* Lin, H. and Selig, E. T.
Sensors: A low-cost electrolytic tiltmeter for measuring slope deformation (Zhang), June, 91
Shear strength
A constant normal stiffness direct shear device for static and cyclic loading (Ooi and Carter), March, 3
Evaluation of shear strength in cohesive soils with special reference to Swedish practice and experience (Larsson, Bergdahl, and Eriksson), Sept., 105
Shear tests
A constant normal stiffness direct shear device for static and cyclic loading (Ooi and Carter), March, 3
Suggested method for performing the borehole shear test (Subcommittee D18.02), March, 19
Sitharam, T. G.: *see* Sivapullaiah, P. V., Sitharam, T. G., and Rao, K. S. S.
Sivapullaiah, P. V., Sitharam, T. G., and Rao, K. S. S.: Modified free swell index for clays, June, 80
Soils
Discussion on "liquid limit of montmorillonite soils" by A. Sridharan, S. M. Rao, and N. S. Murthy (Youssef), Sept., 156
Instrumentation for torsional shear/resonant column measurements under anisotropic stresses (Isenhower, Stokoe, and Allen), Dec., 183
The revised ASTM standard on the description and identification of soils (visual-manual procedure) (Howard), Dec., 229
Soil cement: The prediction of fracture fatigue parameters from creep testing of soil cement (Kim and Little), Sept., 97
Soil classification: The revised ASTM standard on the description and identification of soils (visual-manual procedure), Dec., 229
Soil dynamics: Instrumentation for torsional shear/resonant column measurements under anisotropic stresses (Isenhower, Stokoe, and Allen), Dec., 183
Soil testing: Reproducibility of borehole shear test results in marine clay (Lutenegger and Timian), March, 13
Soil tests
Discussion of "A New Automatic Volume Change Monitoring Device" by N. S. Rad and G. W. Clough (Youssef), March, 38
Method free swell index for clays (Sivapullaiah, Sitharam, and Rao), June, 80
Suggested method for performing the borehole shear test (Subcommittee D18.02), March, 19
Sridharan, A., Rao, S. M., and Murthy, N. S.: Closure to discussion on "liquid limit of montmorillonite soils," Sept., 156
Statistical analysis: Parameter sensitivity of hydraulic conductivity testing procedure (Peirce, Sallfors, and Peterson), Dec., 223
Stewart, J. P. and Nolan, T. W.: Infiltration testing for hydraulic conductivity of soil liners, June, 41
Stokoe, K. H., II: *see* Isenhower, W. M., Stokoe, K. H., II, and Allen, J. C.
Strain rate: Dynamic high stress experiments on soil (Felice, Gaffney, Brown, and Olsen), Dec., 192
Stress-strain behavior: Directional shear cell experiments on a dry cohesionless soil (Sture, Budiman, Ontuna, and Ko), June, 71
Sture, S., Budiman, J. S., Ontuna, A. K., and Ko, H.-Y.: Directional shear cell experiments on a dry cohesionless soil, June, 71
Subcommittee D18.02: Suggested method for performing the borehole shear test, March, 19
Swelling index: Modified free swell index for clays (Sivapullaiah, Sitharam, and Rao), June, 80
Szymoniak, T., Vinson, T. S., Wilson, J. E., and Walker, N.: The dimethyl sulfoxide (DMSO) accelerated weathering test for aggregates, Dec., 173

T

Tiltmeters: A low-cost electrolytic tiltmeter for measuring slope deformation (Zhang), June, 91
Timian, D. A.: *see* Lutenegger, A. J. and Timian, D. A.
Triaxial tests
An alternative method for determining the membrane penetration correction curve (Lin and Selig), Sept., 151
Triaxial testing of brittle sandstone using a multiple failure state method (Cain, Yuen, Le Bel, Crawford, and Lau), Dec., 213
Tumay, M. T.: *see* Rad, N. S. and Tumay, M. T.

V

Vane shear test: Evaluation of shear strength in cohesive soils with special reference to Swedish practice and experience (Larsson, Bergdahl, and Eriksson), Sept., 105
Vann, J. D.: *see* Houston, S. L. and Vann, J. D.
Vinson, T. S.
see Pintner, R. M., Vinson, T. S., and Johnson, E. G.
see Szymoniak, T., Vinson, T. S., Wilson, J. E., and Walker, N.

W-Z

Walker, N.: *see* Szymoniak, T., Vinson, T. S., Wilson, J. E., and Walker, N.
Wasti, Y.: Liquid and plastic limits as determined from the fall cone and the Casagrande methods, March, 26
Wilson, J. E.: *see* Szymoniak, T., Vinson, T. S., Wilson, J. E., and Walker, N.
Youssef, H.: Discussion of "a new automatic volume change monitoring device" by N. S. Rad and G. W. Clough, March, 38
Yuen, C. M. K.: *see* Cain, P., Yuen, C. M. K., Le Bel, G. R., Crawford, A. M., and Lau, D. H. C.
Zhang, X.: A low-cost electrolytic tiltmeter for measuring slope deformation, June, 91

Geotechnical Testing Journal
Table of Contents, Volume 10
1987

No. 1, March

A Constant Normal Stiffness Direct Shear Device for Static and Cyclic Loading—LEAN HOCK OOI AND JOHN P. CARTER 3
Reproducibility of Borehole Shear Test Results in Marine Clay—ALAN J. LUTENEGGER AND DAVID A. TIMIAN 13
Suggested Method: Suggested Method for Performing the Borehole Shear Test—ASTM SUBCOMMITTEE D18.02 19
Technical Note: Liquid and Plastic Limits as Determined from the Fall Cone and the Casagrande Methods—YILDIZ WASTI 26
Technical Note: Factors Affecting Sand Specimen Preparation By Raining—NADER S. RAD AND MEHMET T. TUMAY 31
Discussion of "A New Automatic Volume Change Monitoring Device" by N. S. Rad and G. W. Clough—HAMDY YOUSSEF 38
Testing Forum 40

No. 2, June 1987

Infiltration Testing for Hydraulic Conductivity of Soil Liners—JAMES P. STEWART AND THOMAS W. NOLAN 41
Procedure for Determining the Segregation Potential of Freezing Soils—JEAN-MARIE KONRAD 51
Methods of Evaluating the Expansion Potential of Compacted Soils with Significant Fractions of Large Aggregate—SANDRA L. HOUSTON AND JEFFREY D. VANN 59
Directional Shear Cell Experiments on a Dry Cohesionless Soil—STEIN STURE, JEFFRY S. BUDIMAN, ATES K. ONTUNA, AND HON-YIM KO 71
Technical Note: Modified Free Swell Index for Clays—PUVVADI V. SIVAPULLAIH, THALLAK G. SITHARAM, AND KANAKAPURA S. SUBBA RAO 80
Technical Note: Investigation of Boundary Friction Effects in Polyaxial Tests—COSTAS A. DEMIRIS 86
Technical Note: A Low-Cost Electrolytic Tiltmeter for Measuring Slope Deformation—XINBAO ZHANG 91
Testing Forum 95

No. 3, September

The Prediction of Fracture Fatigue Parameters from Creep Testing of Soil Cement—YOUNGSOO KIM AND DALLAS N. LITTLE 97
Evaluation of Shear Strength in Cohesive Soils with Special Reference to Swedish Practice and Experience—ROLF LARSSON, ULF BERGDAHL, AND LEIF ERIKSSON 105
Undrained Deformability and Strength Characteristics of Soft Bangkok Clay By the Screw Plate Test—DENNES T. BERGADO AND NGO MINH HUAN 113
Resonant Column Testing of Frozen Ottawa Sand—PETER J. BOSSCHER AND DEBRA L. NELSON 123
Cone Penetration of Partially Saturated Sands—ROMAN D. HRYCIW AND CHARLES H. DOWDING 135
Technical Note: Liquid Limit Determination—Further Simplified—TUMKUR S. NAGARAJ, BASVAPATNA R. SRINIVASA MURTHY, AND BINDUMADHAVA 142
Technical Note: Determining Preconsolidation Stress and Penetration Pore Pressures from DMT Contact Pressures—PAUL W. MAYNE 146
Technical Note: An Alternative Method for Determining the Membrane Penetration Correction Curve—HSIUAN LIN AND ERNEST T. SELIG 151
Discussion on "Liquid Limit of Montmorillonite Soils" by A. Sridharan, S. M. Rao, and N. S. Murthy—H. D. SCHREINER 156
Closure to Discussion by H. D. Schreiner 156
Testing Forum 160

No. 4, December

Quantity of Fines Produced During Crushing, Handling, and Placement of Roadway Aggregates—ROBERT M. PINTNER, TED S. VINSON, AND ERIC G. JOHNSON 165
The Dimethyl Sulfoxide (DMSO) Accelerated Weathering Test for Aggregates—TOM SZYMONIAK, TED S. VINSON, JIM E. WILSON, AND NEAL WALKER 173
Instrumentation for Torsional Shear/Resonant Column Measurements Under Anisotropic Stresses—WILLIAM M. ISENHOWER, KENNETH H. STOKIE, II, AND JIMMY C. ALLEN 183

Dynamic High Stress Experiments on Soil—CONRAD W. FELICE, EDWARD S. GAFFNEY, JOSEPH A. BROWN, AND JOSEPH M. OLSEN 192
Cavity Expansion Tests in a Hollow Cylinder Cell—ILAN JURAN AND M. A. BENSAID 203
Triaxial Testing of Brittle Sandstone Using a Multiple Failure State Method—PETER CAIN, CLEMENT M. K. YUEN, GUY R. LE BEL, ADRIAN M. CRAWFORD, AND DONALD H. C. LAU 213
Differential Flow Patterns Through Compacted Clays—J. JEFFRY PEIRCE, GORAN SALLFORS, AND KATHY FORD 218
Technical Note: Parameter Sensitivity of Hydraulic Conductivity Testing Procedure—J. JEFFRY PEIRCE, GORAN SALLFORS, AND ERIC PETERSON 223
Technical Note: The Revised ASTM Standard on the Description and Identification of Soils (Visual-Manual Procedure)—AMSTER K. HOWARD 229
Testing Forum 235